

### REMARKS

Favorable reconsideration of this application, as presently amended and in light of the following discussion, is respectfully requested.

Claims 1-5, 7-15 and 17 are pending in the present application. Claims 1-5, 7-15 and 17 have been amended to incorporate canceled subject matter. Claims 6, 14, 16 and 18 are canceled without prejudice or disclaimer. No new matter is added.

By way of summary, the Official Action presents the following issues: Claims 1-18 stand rejected under 35 U.S.C. § 103 as being unpatentable over Baum in view of Sakoda et al. (U.S. Patent 6,532,223, hereinafter Sakoda); and Claims 6, 14, 16, and 18 have been indicated as reciting allowable subject matter.<sup>1</sup>

### REJECTIONS UNDER 35 U.S.C. § 103

The Official Action has rejected Claims 1-18 under 35 U.S.C. § 103 as being unpatentable over Baum in view of Sakoda. The Official Action contends that Baum describes all of the Applicants' claimed features with the exception of a selection of n sub-carriers and inserting common control channel signals therein. However, the Official Action cites Sakoda as describing these more detailed aspects of the Applicants claimed advancements, and states that it would have been obvious, to one of ordinary skill in the art at the time the advancements were made, to combine the cited references for arriving at the Applicants claims. Applicants respectfully traverse the rejection.

Applicants' amended Claim 1 recites, *inter alia*, a channel structuring a method of configuring channels wherein transmission signals are modulated by orthogonal frequency

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<sup>1</sup> Applicants note that this indication appears at paragraph two of the Official Action and appears to be in conflict with statements made at the paragraph bridging pages 5 and 6 of the Official Action.

division multiplexing comprising  $n$  sub-carriers and multiplexed by time division multiplexing to configure downlink channels, including:

- providing time frames by segmenting a communication channel of said  $n$  subcarriers at every predetermined interval;
- selecting from the  $n$  sub-carriers, a predetermined number of sub-carriers for insertion of common control channel signals and common pilot signals; and
- inserting both a common control channel signal and a common pilot signal into the time frames by time division multiplexing with respect to at least one of the selected sub-carriers.

Baum describes, in relation to Figures 4-6, the transmission of synchronization signals in a frame by a plurality of base units. The coordination is based on a pilot code scheme. As shown in Figure 4, based upon the pilot code (i.e., 1-4) a synchronization signal is transmitted during a specific baud interval. Figures 5-6 describe alternative schemes for coordinating the transmission of synchronization signals.<sup>2</sup>

Sakoda describes a wireless telephone system in which base stations within a certain area use a same channel as a frequency channel for a control information channel CCH, and the timing of transmission of control information CCHs at the same channel is set differently between at least adjacent base stations. Control information CCH transmitted by each base station is accompanied with information of the transmission timing of a control information CCH in another base station adjacent to a base station (for example information of which frequency channel in which time slot being used to transmit).<sup>3</sup>

Conversely, in an exemplary embodiment of the Applicants' claimed advancements, time frames are provided by segmenting a communication channel of  $n$  sub-carriers at every predetermined interval. A predetermined number of  $n$  sub-carriers are selected from the  $n$  sub-carriers for insertion of common control channel signals and common pilot signals. Both

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<sup>2</sup> See Baum at Figs. 4-6; col. 9, line 37 through col. 10, line 58.

<sup>3</sup> See Sakoda at col. 8, lines 11-23.

a common control channel signal and a common pilot signal are inserted into the time frames by time division multiplexing with respect to at least one of the selected sub-carriers.

At page 3 of the Official Action, it is noted that Baum describes at column 8, lines 53-57 and column 10, lines 58-63 that the Baum system may support other system functions such as paging broadcast and synchronization. While the Baum system may be directed toward different purposes, it is unclear how such a statement can possibly be interpreted as changing the operating principal of Baum such that the Baum system would operate as described in the Applicants' claims. Specifically, if the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims *prima facie* obvious. *In re Ratti*, 270 F.2d 810, 123 USPQ 349 (CCPA 1959) In this instance, the suggested combination of references would require a substantial reconstruction and redesign of the elements shown in Baum as well as a change in the basic principle under which the Baum construction was designed to operate.

Moreover, as described above, the Sakoda reference describes that each base station utilizes a different CCH of a different frequency channel and at a different time slot. Thus, even assuming the combination would not require the significant modifications discussed above, even if combined, the combination would not provide time frames by segmenting a communication channel of said n sub-carriers at every predetermined interval such that a predetermined number of sub-carriers may be selected from the n sub-carriers for insertion of common control channel signals and common pilot signals such that both a common control channel signal and a common pilot signal may be inserted into the time frames by time division multiplexing with respect to at least one of the selected sub-carriers as recited in the amended claims.

Accordingly, Applicants respectfully request that the rejection of Claims 1-8 under 35 U.S.C. § 103 be withdrawn.

CONCLUSION

Consequently, in view of the foregoing amendment and remarks, it is respectfully submitted that the present application, including Claims 1-18, is patentably distinguished over the prior art, in condition for allowance, and such action is respectfully requested at an early date.

Respectfully submitted,

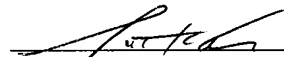
OBLON, SPIVAK, McCLELLAND,  
MAIER & NEUSTADT, P.C.

Customer Number

**22850**

Tel: (703) 413-3000  
Fax: (703) 413 -2220  
(OSMMN 03/06)  
BDL/SAM:sih

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Bradley D. Lytle  
Registration No. 40,073  
Scott A. McKeown  
Registration No. 42,866  
Attorneys of Record